



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,524	07/23/2003	Yong-Hee Lee	P-0483	6671
7590	05/29/2007		EXAMINER	
FLESHNER & KIM, LLP			TRAN, NHANT	
P.O. Box 221200			ART UNIT	PAPER NUMBER
Chantilly, VA 20153-1200			2622	
			MAIL DATE	DELIVERY MODE
			05/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/624,524	LEE ET AL.
	Examiner	Art Unit
	Nhan T. Tran	2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 2/16/2007 & 2/23/2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-32 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-32 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Priority

1. A Certified copy of English translation of Korean priority document filed 2/23/2007 is acknowledged.

Response to Arguments

2. Applicant's arguments, filed 2/16/2007, with respect to claims 8-24 have been considered but are moot in view of the new ground of rejection.
3. Applicant's arguments, filed 2/16/2007 with English translation of Korean priority document filed 2/23/2007, with respect to claims 1, 4 & 5 rejected under USC 102(e) as being anticipated by Watanabe et al. have been fully considered and are persuasive. The rejection of claims 1, 4 & 5 has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of Suso et al. (US 6,069,648) in addition to the existing rejection in view of Yoshida (note multiple rejections).
4. Applicant's arguments, filed 2/16/2007, with respect to claims 1, 2, 4 & 6 rejected under 102(e) as being anticipated by Yoshida et al. have been fully considered but they are not persuasive.

On page 12 of remarks, the applicant asserts that *Yoshida does not teach or suggest the claimed main body having a plurality of buttons formed on a front surface and a camera module mounted on an upper portion of a rear surface of the main body in combination with the camera module mounted such that a viewing direction and an*

imaging direction are substantially parallel when the folder is in an opened state as required in claim 1.

In response, the Examiner respectfully disagrees. Yoshida clearly shows in Figs. 1 & 2 that the main body has a plurality of buttons (buttons 110 shown in Fig. 2) formed on a front surface (the surface containing buttons 110) and a camera module (indicated by lens 108 shown in Fig. 1) mounted on an upper surface portion of a rear surface (see Fig. 1) such that a viewing direction (direction A shown in Figs. 1 & 2) and imaging direction (direction C shown in Fig. 1) are substantially parallel when the folder is an opened state (see Fig. 2). Thus, Yoshida does meet all limitations as mentioned.

Specification

5. Amendment to specification filed 2/16/2007 is accepted.

Claim Objections

6. Claim 2 is objected to because of the following informalities: this claim recites, "the open state" which should be corrected to be consistent with "an opened state" recited in claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 8-10, 14-17, 23, 24, 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Suso et al. (US 6,069,648).

Regarding claim 8, Suso discloses a subscriber unit (a video phone with a subscribed phone number as shown in Figs. 1-9; col. 1, line 56 – col. 2, line 12), comprising:

a first terminal portion (2) including a plurality of buttons (i.e., numerical keypads shown in Figs. 7 & 8);

a second terminal portion (1) foldably connected along a folding axis to the first terminal portion to allow an open configuration and a closed configurations configuration (Figs. 3a & 3b), wherein in the closed configuration the second terminal portion covers at least some of the plurality of buttons (see Fig. 3a);

a display (4) on the second terminal portion (see Figs. 7 & 8);

a camera (indicated by lens 9) mounted on the first terminal portion (2) such that a display viewing direction (viewing direction at display 4) is substantially parallel to a camera imaging direction (direction perpendicular to lens 9 as shown in Figs. 1a-1c) when the second terminal portion is in the open configuration relative to the first terminal position (see Figs. 1 & 6-8; col. 2, lines 49-65).

Regarding claim 9, as shown in Figs. 1 & 2 of Suso, the camera is mounted at an upper portion of the first terminal portion (2).

Regarding claim 10, it is clearly seen in Figs. 1 & 2 that a section (6) of the first terminal portion (2) in which the camera is mounted is wider (side view shown in Fig. 1c) than other sections (i.e., display section and microphone section 13) of the first terminal portion.

Regarding claims 14 & 15, Suso also discloses that the display (4) is a flat panel display comprises a liquid crystal display (LCD). See Figs. 1, 7 & 8 and col. 3, lines 14-16.

Regarding claim 16, as shown in Figs. 1, 7 & 8, the display viewing direction comprises a direction that substantially orthogonal to a viewing surface of the display.

Regarding claim 17, it is also seen in Figs. 1, 7 & 8 that the camera imaging direction comprises a direction substantially parallel to a bisector of a field of view of the camera.

Regarding claims 23 & 24, the camera is a still video camera (see col. 5, lines 27-29).

Regarding claim 1, Suso discloses a mobile terminal with a camera (Figs. 1-9; col. 1, line 56 – col. 2, line 12) comprising:

a main body (2) having a plurality of buttons formed on a front surface (see Figs. 7 & 8);

a folder (1) foldably connected to the main body and having a display (4) formed thereon (see Figs. 7 & 8);

a camera module (indicated by lens 9) mounted at one side an upper portion of a rear surface of the main body for imaging a target, wherein the camera module is mounted such that a viewing direction of the display and an imaging direction of the camera module are substantially parallel when the folder is in an opened state (see Figs. 1a-1c and col. 2, lines 46-65).

Regarding claim 2, Suso further discloses that the camera module is mounted at a predetermined angle such that the imaging direction forms an angle of approximately 90 degrees with respect to a rear surface of the folder when the folder is the open state (see Figs. 1a-1c & Fig. 2, and note that the camera module can be rotated to the rear side of the camera phone such that the incident light to the lens 9 is always perpendicular to the rear surface of the folder 1 as described in col. 3, lines 36-41).

Regarding claim 3, as shown in Fig. 1a-1c and Fig. 2, col. 3, lines 36-41, the camera module is freely rotatable around the rotary shaft (7) to any direction for imaging. The Suso's disclosure also encompasses the claim limitations "the camera module is mounted such that there is formed an angle of 30° between the imaging direction and a normal to the rear surface of the main body."

Regarding claim 4, it is also seen in Figs. 1a-1c and Fig. 4 that a protrusion (6, 8) with a predetermined angle is formed at the upper portion of the rear surface of the main body, wherein the protrusion has a front surface (i.e., the tangent surface at 3 as shown in Fig. 1b) that is positioned so that it is substantially level with a rear surface of the folder (1) when the folder is in the opened state.

Regarding claim 5, it is also seen in Fig. 4 and col. 4, lines 11-22 that the protrusion is formed such that the front surface of the protrusion is at an angle of approximately 30° to the rear surface of the main body (see state 150 degrees shown in Fig. 4 where the tangent surface of the protrusion portion is formed at an angle of 30 degrees to the rear surface of the main body 2 by $180^\circ - 150^\circ = 30^\circ$).

Regarding claim 26, all limitations of claim 26 are also met by the analyses of claims 1 & 8 above.

Regarding claims 27-29, all limitations these claims are also met by the analyses of claims 2, 4 & 5, respectively.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 2, 4, 6, 25-28 & 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida et al. (US 6,690,417).

Regarding claim 1, Yoshida discloses a mobile terminal with a camera (a camera phone shown in Figs. 1 & 2 and col. 5, lines 24-30), comprising:

a main body (the main body shown in Figs. 1 & 2 where buttons 101-103 and 110 are located thereon) having a plurality of buttons formed on a front surface (buttons 110 shown in Fig. 2, and note that this surface is considered as a front surface);

a folder (the portion having speaker 105 and display 107) foldably connected to the main body and having a display (107) formed thereon (Figs. 1 & 2; col. 5, lines 41-48);

a camera module (indicated by lens 108) mounted at upper portion of a rear surface (surface containing buttons 101, 102 and camera 108 shown in Fig. 1) of the main body for imaging a target (col. 6, lines 25-32), wherein the camera module is mounted such that a viewing direction of the display (direction A shown in Fig. 1 when the folder is open as shown in Fig. 2) and an imaging direction of the camera module (direction C illustrated in Fig. 1) are substantially parallel when the folder is in an opened state (see Fig. 2).

Regarding claim 2, Yoshida further shows that the camera module (108) is mounted at a predetermined angle (a right angle to a bottom surface of the main body) such that the imaging direction forms an angle of approximately 90 degrees with respect to a rear surface of the folder when the folder is in the open state (Fig. 2 shows the imaging direction C being substantially perpendicular to the rear surface of the folder when the folder is in an open state). See col. 5, lines 41-48 and col. 6, lines 25-44.

Regarding claim 4, Yoshida also discloses that a protrusion (a protruding portion at camera module 108 shown in Fig. 1) with a predetermined angle (a right angle to the bottom surface of the main body or an angle formed by a tangent line to a side surface of the main body) is formed at the upper portion of the rear surface of the main body, wherein the protrusion has a front surface (the surface which overlaps with the surface having camera module 108, flash 109 and shutter button 102) that is positioned so that it is substantially level with a rear surface of the folder when the folder is in the opened state (see Fig. 2 in which the rear surface of the folder is substantially level with the front surface of the protrusion when the folder is open).

Regarding claim 6, as disclosed in Fig. 1 of Yoshida, the camera module (108) is mounted at the protrusion so that the imaging direction (direction C) of the camera makes an angle of approximately 90 degrees (perpendicular) with respect to the front surface of the protrusion.

Regarding claim 25, Yoshida clearly shows in Figs. 1 & 2 that the rear surface is opposite from the front surface.

Regarding claim 26, Yoshida discloses a mobile terminal (camera phone shown in Figs. 1 & 2) comprising:

a first body (main body shown in Figs. 1 & 2) having a plurality of keys on a first surface (surface containing buttons 110 shown in Fig. 2) of the first body (col. 5, lines 35-41);

a second body (body of display unit 107 and speaker 105 shown in Figs. 1 & 2) coupled to the first body and moveable between an opened position and a closed position, the second body having a display (107; see col. 5, lines 41-48);

a camera module (indicated by lens 108) on a second surface (surface containing 101, 102, 108) of the first body opposite from the first surface (see Fig. 1), wherein when the second body is in the opened position relative to the first body, a viewing direction of the display (direction A) is substantially parallel with an imaging direction (direction C) of the camera module (see Fig. 2 and note the directions illustrated in Fig. 1).

Regarding claim 27, as clearly shown in Figs. 1 & 2 of Yoshida, the camera module is mounted at a predetermined angle such that the imaging direction forms an

angle of approximately 90 degrees with respect to a rear surface of the second body (body of display unit 107) when the second body is in the opened position (Fig. 2).

Regarding claim 28, also disclosed by Yoshida is that a protrusion (protrusion portion at camera module 108 as shown in Fig. 1) with a predetermined angle (a right angle to the bottom surface of the main body or an angle formed by a tangent line to a side surface of the main body) is formed at an upper portion of the second surface of the first body (the main body), wherein the protrusion has a first surface (the surface which overlaps with the surface having camera module 108, flash 109 and shutter button 102) that is positioned so that it is substantially level with a surface of the second body (the body of display unit 107) when the second body is in the opened position (see Fig. 2).

Regarding claim 30, see the analysis of claim 6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7, 12 & 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suso et al. (US 6,069,648) in view of Ban et al. (US 7,076,271 B2).

Regarding claim 12, Suso does not disclose a reflecting surface mounted on the first terminal portion.

However, as taught by Ban et al. (referred as "Ban") in Fig. 2B, a camera phone is disclosed in which a mirror (10) is mounted on the same surface with a camera module (9) so as to enable the user to see himself/herself during self-photographing (see Ban, col. 3, lines 32-51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a mirror on the first terminal portion containing the camera module in Suso in view of the teaching of Ban so as to enable the user to see himself/herself during self-photographing, thereby obtaining accurate framing to avoid out-of-view image.

Regarding claim 13, as analyzed in claim 12, the combined teachings of Suso and Ban disclose the reflecting surface comprising a mirror (10) mounted adjacent to the camera (9) such that a normal (a perpendicular line) to the surface of the mirror is substantially parallel to the camera imaging direction (see Ban, Fig. 2B).

Regarding claim 7, this claim is also met by the analysis of claim 12.

10. Claims 18-22, 31 & 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suso et al. (US 6,069,648) in view of Wada (US 6,965,413).

Regarding claim 18, Suso fails to teach that at least a section of the second terminal portion (1) is rotatable along an axis of rotation that is orthogonal to the folding axis.

In the same field of endeavor, Wada teaches a camera phone comprising a terminal portion (3 shown in Fig. 3c) containing a display (6) which is rotatable along an axis (axis 8h shown in Fig. 4) of rotation that is orthogonal to the folding axis (axis 8d shown in Fig. 4) so that the display can be freely rotated to different directions other than the conventional folding direction, thereby providing user convenience in viewing displayed image from different directions as suggested by Wada in col. 3, lines 5-11.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the camera phone in Suso in view of the teaching of Wada to make the second terminal , where the display is mounted thereon, be rotatable along the axis of rotation that is orthogonal to the folding axis so as to provide user convenience in viewing displayed image from different directions as suggested by Wada above.

Regarding claim 19, Suso in view of Wada also shows that the rotatable section of the second terminal portion is rotatable by at least 180 degrees (see Wada, Figs. 3A-3C and col. 3, lines 50-54).

Regarding claim 20, Suso in view of Wada also discloses that the second terminal portion has a first closed configuration (Fig. 3B of Wada) in which the rotatable

section of the second terminal portion is positioned so that the display is facing a front surface of the first portion (Wada, col. 3, lines 11-15), and a second closed configuration (Fig. 3A of Wada) in which the rotatable section of the second terminal portion is rotated by substantially 180 degrees (Wada, col. 3, lines 50-54) with respect to its position in the first closed configuration.

Regarding claim 21, although Suso is silent about a camera control interface that is positioned so that it can be accessed when the second terminal portion is in the first or second closed configurations, such lack of teaching is compensated by Wada. As shown in Fig. 2B in Wada, a camera control interface is implemented as a jog dial (14) on the side surface of the main body to enable the user to take pictures even the camera phone is in the closed configuration, which is very convenient as described by Wada, col. 2, line 62 – col. 3, line 8.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Suso and Wada to arrive at the Applicant's claimed invention by providing a jog dial on the side surface of the camera phone for *conveniently* controlling the camera even when the camera phone is in the closed configuration as taught by Wada above.

Regarding claim 22, it is also clear that the camera control interface as discussed in claim 21 is positioned at a side surface of the first terminal portion (the main body) as shown by Wada in Fig. 2B.

Regarding claims 31 & 32, the claims are also met by the analyses of claims 20 & 21, respectively.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

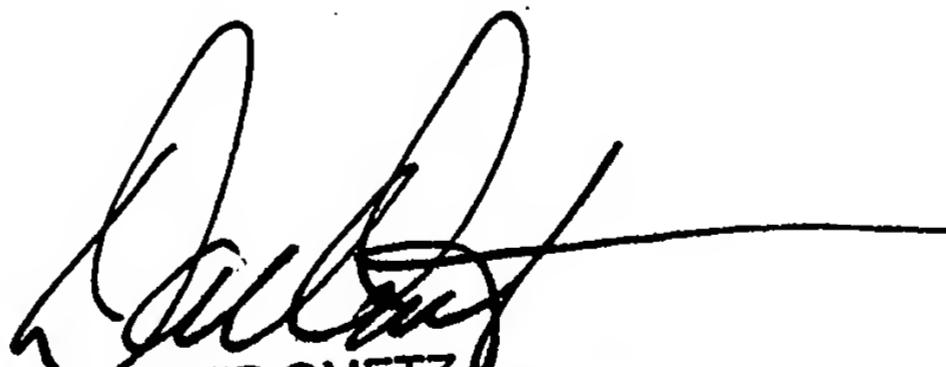
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NHAN T. TRAN
Patent Examiner



DAVID OMETZ
SUPERVISORY PATENT EXAMINER